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EXAMINER

RAYFORD, SANDRA M

ART UNIT PAPER NUMBER

1772

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/127,316

Applicant(s)

CHING ET AL.

Examiner

Sandra M. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 99-139,141-180,182,183 and 186-194 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 99-139,141-180,182,183 and 186-194 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

SUPPLEMENTAL ACTION

*THIS ACTION SUPPLEMENTS THE OFFICE ACTION MAILED ON 22
OCTOBER 2004.*

*It contains the rejections presented in the 22 October 2004 office action as well
as new double patenting rejections not presented there.*

Claims

1. Claims 99-139, 141-180, 182-183 and 186-194 are pending. Claims 1-98, 140, 181 and 184-185 have been cancelled.

Withdrawal of Allowance

2. The allowance of claims 107-139, 141-180, 182-183 and 186-194 is withdrawn in order to apply the new rejections below.

Rejections Withdrawn

3. The 35 USC 112 rejection of claims 99-106 for indefiniteness is withdrawn in view of the amendments to the claims in the response dated 17 August 2004.
4. The 35 USC 102 rejection of claims 99, 100 and 105 based on Tellier et al (US-3,632,684) is withdrawn in response to the arguments made in the response dated 17 August 2004.

New Rejections

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 99, 100, 105-109, 114-120, 122-124, 129-134, 138-139, 141-167 and 189-194 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer et al (US 5,399,289) in view of Tellier et al (3,632,684).

Speer teaches compositions and articles (title) that employ, as oxygen scavengers, copolymers of ethylene, vinyl esters and 4-vinyl-cyclohexene (see claim 3 of the patent). The compositions also contain metal catalysts (claim 1 of the patent) and polymer diluents (col. 6, lines 51-66).

The article may be packages for food (col. 1, lines 20-32) and may be multilayered, with other layers of oxygen barrier materials (col. 8, lines 16-58).

Speer's metal catalysts may be cobalt salts (col. 6, lines 20-36).

Speer can use vinylic esters other than vinyl acetate and cyclic olefins other than 4-vinyl-cyclohexene (col. 5, lines 1-5 and 60-69).

Speer fails to teach the X-Y links of applicants' claims in its copolymers.

Tellier teaches copolymers having pendant groups that include cyclohexyl moieties linked to the backbone via C(O)O-CH₂ groups (see the abstract and col. 2,

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lines 1-22). Its copolymers are used, alone or with other polymers, to make molded articles (col. 2, line 42 and col. 4, lines 17-26) that have improved impact strength over copolymers that do not have the recited groups (col. 2, lines 19-22).

The patents are analogous because both deal with moldable vinylic copolymers.

It would have been obvious to one having ordinary skill in the art at the time of the invention to employ the copolymers of Tellier in the compositions and articles of Speer in order to improve the impact strength of the articles.

The motivation to employ the copolymers of Tellier in the compositions and articles of Speer is found at col. 2, lines 19-22 of Tellier, where improved impact strength is taught.

It is deemed beneficial to make articles having improved impact strength so that they can withstand stresses involved in their storage, transportation and use.

8. Claims 101-104, 110-113, 121, 125-128, 135, 168-180, 182-183 and 186-188 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Tellier et al as applied to claims 99, 100, 105-109, 114-120, 122-124, 129-134, 136-139, 141-167 and 189-194 above, and further in view of Ching et al (US 5,736,616).

Speer and Tellier are discussed above. They fail to teach (trans)esterification or photoinitiators.

Ching teaches the use of photoinitiators (col. 25, lines 35-65) in compositions containing (trans)esterification products made from ethylenic backbone polymers and hydroxyl-substituted cyclic olefin compounds (abstract, title, col. 11, lines 3-14). Nopol ester (col. 11, lines 10-11) is an cyclic olefin ester.

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Its photoinitiators facilitate control of the oxygen scavenging properties of the copolymers (col. 25, lines 35-39). The (trans)esterification products can be made in mixing equipment economically (col. 1, lines 33-41).

The three patents are analogous because they all deal with moldable vinylic copolymers.

It would have been obvious to one having ordinary skill in the art at the time of the invention to employ the photoinitiators and (trans)esterification technique of Ching to make oxygen scavenging copolymers, compositions and/or articles based on the combination of Speer and Tellier in order to make the copolymers compositions and/or articles economically.

The motivation to employ the photoinitiators of Ching to make oxygen scavenging copolymers, compositions and/or articles based on the combination of Speer and Tellier is found at col. 25, lines 35-39 of Ching, where photoinitiators are taught to facilitate control of oxygen scavenging properties.

The motivation to employ the photoinitiators and (trans)esterification technique of Ching to make oxygen scavenging copolymers, compositions and/or articles based on the combination of Speer and Tellier is found at col. 1, lines 33-41 of Ching, where the economic production of copolymers is taught.

It is deemed beneficial to make oxygen scavenging articles whose scavenging properties can be controlled and that can be made economically in order to customize the articles' properties and to save money.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56 of U.S. Patent No. 6,437,086. Although the conflicting claims are not identical, they are not patentably distinct from each other because the compositions and packaging articles claimed in the '086 patent differ from those claimed in this case only in that polymeric metal salt catalysts are recited in the '086 patent claims.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ any conventional metal salts in the compositions/articles of the '086 claims to catalyze their oxygen scavenging effects.

11. Claims 107-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,454,965. Although the conflicting claims are not

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identical, they are not patentably distinct from each other because the compositions/laminates of the '965 patent claims differ only in that they require a layer of a condensation polymer therein.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ compositions/laminates covered by the '965 patent claims in any way that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed.

12. Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,525,123. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '123 claims differ from those of this case only in that they require an EVOH polymer in combination with the oxygen scavenging cyclic polymer/metal combination claimed here.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ compositions covered by the '123 patent claims in any suitable way that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed.

13. Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-68 of U.S. Patent No. 6,527,976. Although the conflicting claims are not

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identical, they are not patentably distinct from each other because the claims of the '976 patent differ from the instant claims only in that they call for a curing agent for the cyclic olefin polymer.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ compositions/laminates covered by the '976 patent claims in any way that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed. Eliminating the added curing agent would make the compositions less costly.

14. Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,610,215. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method of scavenging recited in the '215 claims is the same as the scavenging effected by the use of the compositions claimed in this case.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to employ methods covered by the '215 patent claims in any way that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed.

15. Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 09/664,993. Although the conflicting claims are not identical, they are not patentably distinct from each other

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because the containers recited in the '993 claims differ from the packaging articles claimed here only in that the '993 containers have a polyester layer therein.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to make containers that employ the oxygen scavenging system covered of the '993 claims in any way that is consistent with the oxygen scavenging properties of the cyclic copolymer/-metal salt combination claimed. That is, packaging articles that do not contain polyester layers are deemed obvious over the containers of the '993 claims since eliminating the polyester layers would make the packaging simpler/less expensive to produce.

16. Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 55-71 of copending Application No. 09/666,642. Although the conflicting claims are not identical, they are not patentably distinct from each other because the packaging articles of the '642 application claims call for a second oxygen barrier layer not recited in the instant application's claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to make containers that employ the oxygen scavenging system of the '642 claims in any way

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that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed. That is, using an additional oxygen barrier layer is deemed a conventional way of insuring that oxygen will not get into the packaging. Eliminating that layer would effect cost savings.

17. Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of copending Application No. 10/609,050. Although the conflicting claims are not identical, they are not patentably distinct from each other because the packaging articles claimed in the '050 case differ from the articles recited in the instant claims in that they call for an EVOH barrier layer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In the absence of convincing objective evidence to the contrary, it would have been obvious to one having ordinary skill in the art at the time of the invention to make containers that employ the oxygen scavenging system of the '050 claims in any way that is consistent with the oxygen scavenging properties of the cyclic copolymer/metal salt combination claimed. That is, using an additional oxygen barrier layer is deemed a conventional way of insuring that oxygen will not get into the packaging. Eliminating that layer would effect cost savings.

Response to Arguments

18. Applicant's arguments with respect to claims 99-139, 141-180, 182-183 and 186-194 have been considered but are moot in view of the new ground(s) of rejection.

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Citations as of Interest (listed in the 22 October Office Action)

19. Yang et al (US 2002/0102424A1) and Ito et al (JP 09011416) are cited for teaching substituted cyclic olefin monomers in oxygen scavenging copolymers.

Citations Added in This Supplemental Action


20. The citations listed on the enclosed reference citation form (Paper No. 20050216) relate to the new obviousness double patenting rejections above.

Conclusion

Any inquiry concerning this communication should be addressed to Sandra M. Nolan-Rayford, at telephone number 571/272-1495. She can normally be reached Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the examiner are unsuccessful, her supervisor, Harold Pyon, can be reached at 571/272-1498.

The fax number for patent application documents is 703/872-9306.


S. M. Nolan-Rayford
Primary Examiner
Technology Center 1700

09127316(20050216)